MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TRIMESTER 1, 2016/2017

BFN2104 – CORPORATE FINANCE

(All sections / Groups)

10th OCTOBER 2016
2.30 p.m – 4.30 p.m
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of **FIVE (5)** printed pages with five (5) questions only.
2. Attempt **ALL** questions.
3. Please write all your answer in the Answer Booklet provided.
4. Marks are shown at the end of each question.

STRUCTURED QUESTIONS (100 Marks)

There are FIVE (5) questions in this section. Candidates MUST answer ALL questions.

Question 1 (20 Marks)

a. Consider two firms in the same industry that operate in frictionless markets. Both firms, DebtHungry and Ner-aBorrower, have identical net operating income of RM200,000 per year. The riskiness of each company's assets suggests a fair weighted average cost of capital of 10 percent.

i) What is the value of each company?

(5 marks)

ii) If DebtHungry has borrowed RM500,000 at a required rate of return of 5 percent, what is the fair required rate of return on the firm's equity?

(5 marks)

b. Couglin Bhd. has net operating income of RM120,000 per year. Couglin uses no debt in its capital structure and the required rate of return to equity holders is 12 percent.

i) Calculate the value of the unlevered firm if the firm has a marginal tax rate of 0%.

(3 marks)

ii) Calculate the value of the unlevered firm if the firm has a marginal tax rate of 30%.

(3 marks)

iii) Interpret the difference in your findings to parts i and ii.

(2 marks)

iv) If your answer to part i is less than your answer to part ii, can we increase firm value by taking on debt? If so, will these benefits always continue as we add more and more debt?

(2 marks)

Continued...

Question 2 (20 Marks)

a. You are considering a massive expansion of your manufacturing facility. Two proposals are being considered. The first facility, code named Quick and Dirty, will cost RM200,000 immediately and will produce RM35,000 per year in cash flows for the next ten years. The second alternative, code named Slow but Sure, will require an outlay of RM400,000 and will produce cash flows of RM75,000 per year for the next ten years. The required rate of return on both of these projects is 12 percent.

i) Calculate the net present value and profitability index for both projects.

(10 marks)

ii) If you can undertake only one of these two projects, which will you choose?

(2 marks)

iii) If you learn that your firm is only able to invest RM400,000 in funds for the next year, will this influence your decision? If so, what else would you wish to know before proceeding with a decision?

(3 marks)

b. Ergophonics Bhd. initially has equity with market value RM4 billion. It has no debt. The equity has beta 0.8. The firm is planning to issue RM0.5 billion of debt, which will have beta of 0.1. The proceeds from the debt issue will be used to retire equity, such that firm size does not change. What will the new equity beta be?

(5 marks)

Question 3 (20 Marks)

a. A firm is considering diversifying and investing in a line of business in an industry in which the firm does not currently operate. In doing some research, you determine the new industry has an average equity beta of 1.06, an average debt-to-equity ratio of 20%, and an average tax rate of 30%. Your firm has a debt ratio of 25%, but the same average tax rate of 30%. Assume that debt betas in the firm and new industry are zero.

i) What beta would you use in the Capital Asset Pricing Model (CAPM) model to determine the appropriate cost of equity for the evaluation of the project?

(4 marks)

Continued...

ii) Why would this be an appropriate beta?

(2 marks)

iii) The expected return on the market portfolio is 8% while the risk-free rate of interest is 3%. What would be the CAPM derived cost of equity? Is this the appropriate discount rate for the project's cash flows?

(4 marks)

b. The Net Present Value (NPV) of a project based on the cost of equity is –RM5 million. In order to complete the Adjusted Present Value (APV) analysis, the debt shield must be calculated based on a tax rate of 25%.

Option 1: The firm can issue RM20 million of 7% debt over a 20-year period, or

Option 2: The firm can issue RM30million of 6% debt over 15 years (assume that all debt is issued at par).

i) Calculate Adjusted Present Value (APV) for each debt issue option. Which option will provide the better APV?

(8 marks)

ii) Will the project be acceptable? Why?

(2 marks)

Question 4 (20 Marks)

a. A company has total book value of common stock equal to RM750,000, a par value of RM2 per share, 100,000 shares issued and outstanding, and the market value of the common stock is RM85 a share.

i) What is the company's additional paid-in capital?

(5 marks)

ii) What is the market capitalization?

(5 marks)

Continued...

b. Your New York bank quotes the following exchange rates. The exchange rate for euros to dollars is U.S.$1.0821/€. The exchange rate for Canadian dollars to U.S. dollars is U.S.$0.6164/C$.

i) What is the euro/Canadian dollar exchange rate?

(4 marks)

ii) Assume you find in Germany an exchange rate of €0.6064/C$. Demonstrate triangular arbitrage assuming you have U.S. $1,000,000.

(6 marks)

Question 5 (20 Marks)

Honey Bhd. thinks that it can reduce its high credit costs by tightening its credit standards. However, the firm believes that the planned tightening will result in a decline in annual sales from RM38 million to RM36 million. On the positive side, the firm expects its average collection period (ACP) to fall from 58 days to 45 days and its bad debts to drop from 2.5% to 1% of sales. The firm's variable cost per unit is 70% of its sale price, and its required return on investment is 15%. Assume a 365-day year.

i) By how much will profits from decreased sales change if Honey Bhd adopts the new credit standards?

(3 marks)

ii) Under the current credit standards, what is Honey Bhd's average investment in account receivables (AIAR)?

(3 marks)

iii) What would AIAR be under the proposed credit standards?

(3 marks)

iv) How much savings will Honey Bhd enjoy resulting from the reduced AIAR?

(4 marks)

v) What is Honey Bhd's savings from marginal bad debts resulting from the tightening of its credit standards?

(4 marks)

vi) Based on the result from (i) to (v), evaluate the proposed tightening of credit standards, and make a recommendation to the management of Honey Bhd.

(3 marks)

End of Page